KHANDROO DESIGNS | ARCHITECTURAL WINDOWS & DOORS

Care & Preventative Maintenance Manual

Applicable Systems: Aluminum, uPVC, Wood & Wood-Clad Products | Inland, Coastal (< 5 Miles) & Industrial Zones

1. PURPOSE, SCOPE & WARRANTY COMPLIANCE REQUIREMENT

This Care & Preventative Maintenance Manual applies to **all products sold and distributed by Khandroo Designs**, including **Aluminum, uPVC, Wood, and Wood-Clad windows and doors** (collectively, the "Products"). High-performance architectural fenestration systems are precision-engineered for decades of smooth operation and aesthetic durability. Consistent with luxury fenestration industry best practices, **routine preventative maintenance is mandatory** to preserve finish integrity, weather-tightness, and mechanical operation—and is an explicit condition of the **Khandroo Designs Limited Warranty** (including warranty transferability upon property sale).

Airborne contaminants such as salt spray, industrial fallout, construction dust, acid rain, and mineral deposits from irrigation sprinklers chemically attack architectural finishes, wood coatings, and precision hardware if allowed to accumulate and bake onto surfaces under UV exposure.

2. ENVIRONMENTAL EXPOSURE ZONES & REQUIRED FREQUENCY

Maintenance frequency is dictated by proximity to marine/saltwater environments and atmospheric pollutants:

Exposure Zone Classification	Site Criteria	Minimum Cleaning & Inspection Schedule
Standard Inland / Mild Zone	Located 5 miles or more from saltwater, bays, or tidal estuaries, and away from heavy industrial or high-pollution corridors.	**Every 6 Months (Semi-Annual Full Wash & Check-Up)**
Moderate Coastal / Urban Zone	Located between 1 mile and 5 miles from saltwater/marine environments, or adjacent to golf courses/fertilizer runoff or dense urban traffic.	**Every 3 Months (Quarterly Full Wash & Freshwater Rinse)**
Severe Marine / Heavy Industrial Zone	Located within 1 mile of oceanfront/surf, bays, or saltwater channels, OR adjacent to heavy industrial, chemical, or manufacturing plants.	**Monthly (Every 30 Days) (Monthly Wash + Bi-Weekly Freshwater Rinse on Exposed Exteriors)**

Note on Sheltered Areas: *Soffits, covered lanais, upper frame headers, and unwashed undersides do not receive natural rainfall rinsing and accumulate concentrated salt and acid deposits. These sheltered surfaces require deliberate hand-washing at the exact same interval as exposed surfaces.*

3. MATERIAL & FINISH-SPECIFIC CARE PROTOCOLS

Always clean frames in the shade when surfaces are cool to the touch (below 85°F / 30°C) to prevent rapid evaporation and chemical spotting. Work from the top down.

- **PVDF Architectural Coatings (Aluminum & Wood-Clad Exteriors):** Flush loose grit with clean low-pressure water. Wash gently with a soft microfiber cloth or non-abrasive soft-bristle brush using a solution of mild pH-neutral dish soap (e.g., Dawn® or Joy®, pH 6.0–8.0) diluted in lukewarm water. Rinse thoroughly with clean water and dry with a

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chamois or lint-free towel. For stubborn organic deposits or light chalking, isopropyl alcohol or mineral spirits may be spot-tested in an inconspicuous area, followed immediately by a mild soap wash and clean water rinse.

- **Architectural Powder Coat Finishes (Aluminum & Wood-Clad Exteriors):** Wash with clean water and a diluted pH-neutral detergent using a soft sponge or microfiber cloth, then rinse thoroughly and wipe dry. Do not use aggressive solvents, ketones, esters, or strong alcohols on powder-coated surfaces, as they can soften or dull the polymer film. Never use abrasive polishes or rubbing compounds on matte, textured, or metallic powder coats.
- **Architectural Anodized Aluminum (Clear, Bronze, Champagne & Black):** Anodized finishes are an integral aluminum oxide layer that cannot peel, but they are highly vulnerable to alkaline and acidic chemical etching. Clean with mild pH-neutral soap and warm water using a soft cloth or non-woven nylon pad (white 3M™ Scotch-Brite 7445 only—never green or maroon pads), then rinse completely and dry. In coastal or industrial environments, apply a thin coat of non-yellowing architectural carnauba wax or specialty anodized aluminum sealer/protectant annually after cleaning to seal microscopic pores against salt pitting.
- **uPVC Frames & Foiled / Acrylic-Coated uPVC Profiles:** Wash uPVC frames with lukewarm water and a mild pH-neutral detergent using a soft cloth or sponge, then rinse with clean water and wipe dry with a soft lint-free cloth to prevent static dust attraction. Never use dry cloths on dusty uPVC (which causes micro-scratching), and strictly avoid solvent-based cleaners, acetone, paint thinners, chlorine bleach, or abrasive creams, which permanently discolor or soften uPVC and laminated exterior foils.
- **Wood & Interior Wood-Clad Surfaces:** Dust interior and exterior wood surfaces regularly with a clean, dry microfiber cloth. Clean with a lightly dampened cloth using warm water and a small amount of mild, wood-safe pH-neutral soap, immediately drying with a soft towel—never saturate wood joints or allow standing water on timber profiles. Inspect factory-applied stains, lacquers, or exterior topcoats annually for micro-checking, UV wear, or moisture intrusion (especially along bottom sills and miter joints), and touch up or re-coat promptly using compatible architectural wood finishes.

4. TRACKS, DRAINAGE WEEP SYSTEMS, GLASS & WEATHERSTRIPPING

- **Sill Tracks & Weep Holes (Critical for Water Management):** Vacuum dirt, sand, pet hair, and insect debris from bottom door/window tracks at least quarterly (monthly in coastal zones). Flush sill drainage channels with clean water to verify unobstructed flow through exterior weep holes and weep baffles. Never seal, caulk, paint over, or block exterior weep slots.
- **Insulated Glass Units (IGUs) & Low-E Coatings:** Pre-rinse glass with clean water to remove abrasive silica sand or salt crystals before wiping. Clean exterior and interior glass with a pH-neutral glass cleaner or mild soap solution and a soft microfiber cloth or rubber squeegee. Never use razor blades, metal scrapers, or abrasive pads on glass (especially on exposed Low-E surfaces), as they cause permanent micro-scratching.
- **EPDM Gaskets & Weatherstripping:** Wipe down perimeter compression gaskets, bulb seals, and brush pile weatherstripping with a damp cloth during each scheduled wash. Inspect annually for shrinkage, tearing, or loss of elasticity. Apply a light wipe of pure food-grade silicone protectant (such as 303® Aerospace Protectant or silicone emulsion—never petroleum-based products) annually to keep EPDM seals supple.

5. MECHANICAL HARDWARE, ROLLERS & ELECTRONIC SYSTEMS

- **Monthly Operational Exercise:** Open, close, and fully engage all window sashes, multi-point door locks, sliding panels, and ventilation hardware at least once every 30 days to prevent seal compression set and keep internal gearboxes free of salt crystallization.
- **Annual Lubrication & Alignment Check-Up:** At least once per year (every 6 months within 5 miles of saltwater), inspect all hinges, multi-point locking cams, keeps, sliding rollers, and tracks for smooth alignment. Clean salt or grit from stainless steel hardware components (even 304/316 marine-grade stainless steel will develop surface 'tea staining' if salt is not periodically washed off). Lubricate moving pivot points, locking cams, and roller bearings with a

dry PTFE- or silicone-based lubricant—never use WD-40® solvent, heavy grease, or graphite, which attract abrasive dust.

- **Electronic Openers, Locks & Magnetic Actuators:** Keep motorized operators, electronic strikes, magnetic contacts, and control housings dry and free of dust or spider webs. Never spray water or liquid cleaners directly onto electronic actuators, keypads, or wiring harnesses; wipe exterior housings only with a lightly dampened cloth. Test backup batteries, limit switches, and obstruction safety sensors semi-annually.

6. STRICTLY PROHIBITED CLEANERS & PRACTICES

Use of any of the following products or methods will permanently damage architectural finishes, wood coatings, or uPVC profiles and **immediately void warranty coverage**:

- **Acidic or Alkaline Cleaners:** Muriatic acid, brick/masonry wash, hydrofluoric or phosphoric acid, bleach (sodium hypochlorite), ammonia, trisodium phosphate (TSP), lye, or strong oven/drain cleaners.
- **Abrasives & Harsh Solvents:** Steel wool, abrasive scouring powders, green/brown Scotch-Brite™ pads, sandpaper, razor blades, paint thinners, acetone, MEK, lacquer thinner, or xylene.
- **High-Pressure Washing:** Never use a pressure washer on windows, doors, weep holes, gaskets, wood joints, uPVC, or anodized/painted frames. High-pressure jets force water past perimeter seals and can delaminate coatings or blow out IGU seals.
- **Irrigation & Sprinkler Overspray:** Adjust landscaping sprinklers so hard tap water, reclaimed water, and liquid fertilizers never spray onto frames or glass. Hard-water mineral etching, wood water damage, and fertilizer corrosion are excluded from warranty coverage.

7. ANNUAL MAINTENANCE & INSPECTION LOG (KEEP FOR WARRANTY & PROPERTY TRANSFER)

In accordance with Section 1 of the Khandroo Designs Limited Warranty, **warranty coverage transfers to a new property owner only if annual cleaning, hardware adjustments, and operational check-ups are performed and documented prior to ownership transfer.** Retain receipts and complete the log below:

Date	Service Performed (Wash / Tracks / Hardware Adj. / Lube)	Exposure Zone	Technician / Owner Initials

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